



**NEW**

Looking for a Reliable/Miniature  
Contact Cooling Water Chiller?  
We're Out There!



**Cosmetic Skin "CS" Contact Cooling Water Chiller**  
**Ideal for Hair Removal & Blemish Treatment**

## CHILLER MODULE FEATURES

### K-O Concepts Model CS

- **Designed for Superficial Laser Skin Procedures**

The CS chiller is intended to minimize pain and thermal injury during laser and dermatological treatments.

- **24 Volts DC Input Power**

Easily qualify the CS chiller for UL or other agencies without concern about high voltage parts. The compressor, pump and fan motors inside the CS chiller are brushless DC.

- **Efficient Power Usage**

Help to make your laser system efficient, with only 120 watts total power consumption.

- **Dual Handpiece Cooling**

The CS chiller can operate seamlessly with two handpiece units. A spare "Chilled Tip" handpiece will minimize procedure interruptions.

- **Rapid Handpiece Cooling**

Two "Chilled Tip" Handpieces can be cooled to operational temperature within 20 minutes (typical).

- **Easily Integrated**

The CS chiller weighs only 22 lbs. / 10.0 kg and has a volume of 0.75 ft.<sup>3</sup>. The OEM chiller is integrated into your laser system.

- **Custom Maintenance Features**

The CS chiller reports water flow (both channels), water level, and temperature directly to the laser system.

- **CFC Free Refrigerant**

The CS chiller uses environmentally friendly R134a (HFC-134a) refrigerant. Chiller units using this refrigerant can be sold into Europe and Asia. This is the same refrigerant used in all new automobiles.

- **Cost Efficient**

The CS chiller has no consumable or additional cost.

## Chiller Module Specifications & Options

### K-O Concepts Model CS

<b>K-O Concepts Inc. Chiller Part Number</b>	2542-2700
<b>Cooling Type</b>	Refrigeration w/ hermetic compressor. Motor type: 24 VDC input w/ electrically commutated motor.
<b>Refrigerant</b>	R134a (HFC-134a). Refrigerant is CFC- Free.
<b>Process Coolant Pump</b> Pump type: Centrifugal, magnetically coupled (seal-less), water pump.	<b>Model MD05:</b> w/ 24 VDC electrically commutated motor. <b>Note:</b> Pump body is fabricated from engineered plastics. <b>Note:</b> See performance curves on following page.
<b>Process Coolant Connections</b>	Two sets of process coolant connections: Connections via Colder Products LC series quick-couplings as defined by customer. See K-O Interface Control Drawing (ICD) part # 2543-2700.
<b>Process Coolant Temperature Range</b>	5.0-7.0°C (typical) with two laser delivery hand-pieces installed.
<b>Cooling Performance</b> <b>Note:</b> Performance w/ ambient air @ 25°C	Process coolant depression from 20-7°C: 25 minutes (typical). Minimum coolant temperature: 5.0-7.0°C (typical).
<b>Process Coolant Temperature Stability</b>	±0.5°C (typical)
<b>Heat Dissipation</b>	To air (air-cooled) <b>Note:</b> Chiller module requires customer fan after installation into cabinet.
<b>Condenser Fan</b>	Motor type: 12 VDC input w/ electrically commutated motor.
<b>Condenser Fan Control</b>	Chiller utilizes a speed-controlled fan for improved coolant temperature control over ambient air temperature range.
<b>Environment</b>	Indoor operation w/ unrestricted ambient air from 15-30°C/59-86°F.
<b>Process Coolant</b>	70% distilled water / 30% isopropyl alcohol.
<b>Process Coolant Capacity</b>	33 oz. / 1.0 liters <b>Note:</b> Volume does not include hand-pieces or external fill bottle.
<b>Coolant Drain</b>	Coolant drained with chiller pump via drain tube provided. 24 oz. / 0.7 liters is typical coolant recovery volume.
<b>Heat Exchangers</b>	Condenser: Refrigerant to air heat exchanger (tube & fin design). Condenser coil removes heat from refrigerant via fan. Evaporator: Refrigerant to water heat exchanger (brazed-plate design). Evaporator transfers heat from coolant.
<b>Input Power Requirements</b>	24.0 VDC @ 5 amps (typical). Voltage range: 22.7-31.5 VDC. <b>Note:</b> 150 watt switching converter power supply optional.
<b>Electrical Interface Signals</b> <b>Note:</b> All interface signals are contact closures. <b>Note:</b> Flow & level switches are reed switch type.	Signals (N.C. / normally closed in passed condition): Process water flow (dual channel) & process water level.
<b>Process Coolant Flow Switch</b> <b>Note:</b> Device monitors process coolant flow through each of "2" customer hand-pieces.	Set point value: 200 cc/min (each channel). Process coolant flow below set point value opens contact. <b>Note:</b> Pump power should be removed if both switches are open.
<b>Process Level Switch</b> <b>Note:</b> Device monitors process coolant level in coolant tank.	Process coolant level switch allows for 8 oz. / 0.25 liters loss of coolant before opening contacts.
<b>Dimensions (H x W x D)</b>	See K-O Interface Control Drawing (ICD) # 2543-2700
<b>Dry Weight</b>	22.0 lbs / 10.0 kg

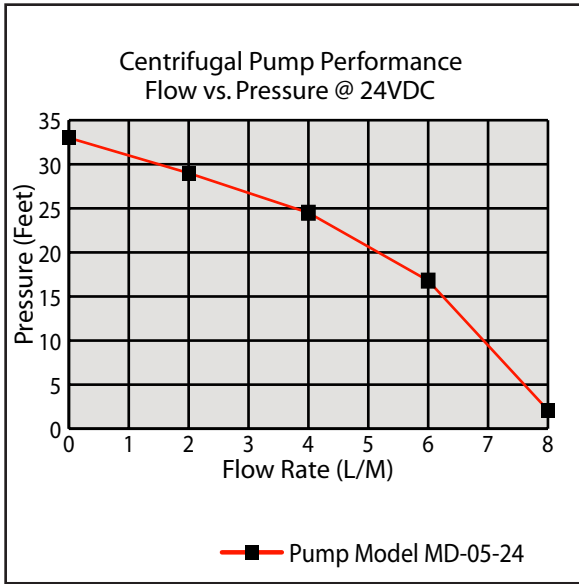
#### Notes:

- \* Data shown is with 15-30°C / 59-86°F (unrestricted) ambient air.
- \* Cooling capacity ratings are with process coolant @ 5-7°C / 41-44.6°F.
- \* Specifications are subject to change without notice.

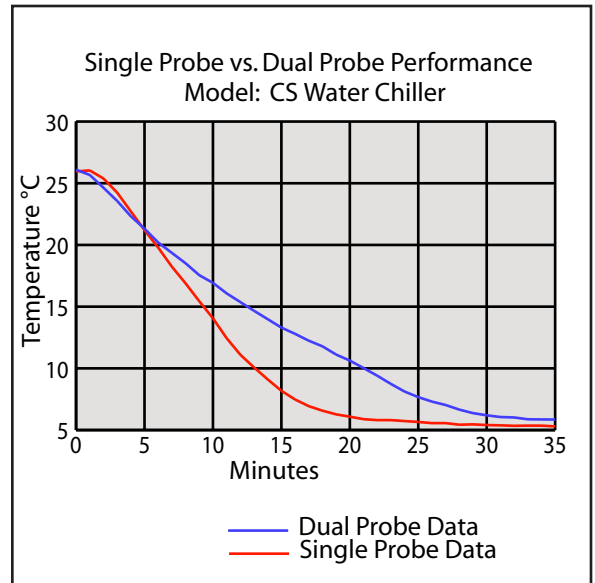
# CHILLER MODULE PERFORMANCE DATA

## K-O Concepts Model CS

### Process Water Pump Performance



### Thermal Performance



## FEATURES & DIMENSIONS

Adobe PDF Interface Control Drawing (ICD) #2543-2700 Supplied On Request

**K-O Concepts, Incorporated**  
4375 South Street  
Titusville, Florida, 32780  
Phone: 407/296-7788 • Fax: 321/567-0046  
E-Mail: Sales@K-OConcepts.com • Web: www.K-OConcepts.com

